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TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number	09/885,485
Filing Date	June 20, 2001
First Named Inventor	Kaushik GHOSH
Group Art Unit	2155
Examiner Name	Bharat Barot
Total Number of Pages in This Submission	
Attorney Docket Number	Juniper-11 (JNP-0105)

ENCLOSURES *(check all that apply)*

- [X] Fee Transmittal Form
  - [ ] Fee Attached
- [ ] Amendment / Reply
  - [ ] After Final
  - [ ] Affidavits/declaration(s)
- [ ] Extension of Time Request
- [ ] Express Abandonment Request
- [ ] Information Disclosure Statement
- [ ] Certified Copy of Priority Document(s)
- [ ] Response to Missing Parts/ Incomplete Application
  - [ ] Response to Missing Parts under 37 CFR 1.52 or 1.53
- [ ] Assignment Papers *(for an Application)*
- [ ] Drawing(s)
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- [ ] Petition
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- [ ] Power of Attorney, Revocation Change of Correspondence Address
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- [ ] After Allowance Communication to Group
- [ ] Appeal Communication to Board of Appeals and Interferences
- [X] Appeal Communication to Group *(Appeal Notice, Brief, Reply Brief)*
- [ ] Proprietary Information
- [ ] Status Letter
- [X] Postcard Receipt
- [X] Other Enclosure(s) *(please identify below)*:

Claims Appendix, Evidence Appendix, and Related Proceedings Appendix.

Remarks

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	John C. Pokotylo (Reg. No. 36,242)
Signature	John C. Pokotylo
Date	July 3, 2006

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Modified PTO/SB/17 (01-03)
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U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

FEE TRANSMITTAL for FY 2005

Effective 12/08/2004. Patent fees are subject to annual revision.

☐ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT ($) 500.00

Complete if Known	
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Filing Date	June 20, 2001
First Named Inventor	Kaushik GHOSH
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METHOD OF PAYMENT *(check all that apply)*

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Deposit Account Name: Straub & Pokotylo

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FEE CALCULATION

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1000	500	Utility fee	
430	215	Design fee	
660	330	Plant fee	
1400	700	Reissue fee	
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2. EXTRA CLAIM FEES FOR UTILITY AND REISSUE

	Extra Claims		Fee from below	Fee Paid
Total Claims		-20** =		X =
Independent Claims		- 3** =		X =
Multiple Dependent				=

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description
1202	50	2202	25	Claims in excess of 20
1201	200	2201	100	Independent claims in excess of 3
1203	360	2203	180	Multiple dependent claim, if not paid
1204	200	2204	100	**Reissue independent claims over original patent
1205	50	2205	25	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2) ($) 00.00

**or number previously paid, if greater, For Reissues, see above

FEE CALCULATION (continued)

3. ADDITIONAL FEES

Large Entity Fee Code	Large Entity Fee ($)	Small Entity Fee Code	Small Entity Fee ($)	Fee Description	Fee Paid
1051	130	2051	65	Surcharge - late filing fee or oath	
1052	50	2052	25	Surcharge - late provisional filing fee or cover sheet	
1053	130	1053	130	Non-English specification	
1812	2,520	1812	2,520	For filing a request for ex parte reexamination	
1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
1805	1,840*	1805	1,840*	Requesting publication of SIR after Examiner action	
1251	120	2251	60	Extension for reply within first month	
1252	450	2252	225	Extension for reply within second month	
1253	1,020	2253	510	Extension for reply within third month	
1254	1,590	2254	795	Extension for reply within fourth month	
1255	2,160	2255	1,080	Extension for reply within fifth month	
1401	500	2401	250	Notice of Appeal	
1402	500	2402	250	Filing a brief in support of an appeal	500.00
1403	1,000	2403	500	Request for oral hearing	
1451	1,510	1451	1,510	Petition to institute a public use proceeding	
1452	500	2452	250	Petition to revive - unavoidable	
1453	1,500	2453	750	Petition to revive - unintentional	
1501	1,400	2501	700	Utility issue fee (or reissue)	
1502	800	2502	400	Design issue fee	
1503	1,100	2503	550	Plant issue fee	
				Petitions to the Commissioner – check fee sheet	
1807	50	1807	50	Processing fee under 37 CFR 1.17(c)	
1806	180	1806	180	Submission of Information Disclosure Stmt	
8021	40	8021	40	Recording each patent assignment per property (times number of properties)	
1809	790	2809	395	Filing a submission after final rejection (37 CFR 1.129(a))	
1810	790	2810	395	For each additional invention to be examined (37 CFR 1.129(b))	
1801	790	2801	395	Request for Continued Examination (RCE)	
1802	900	1802	900	Request for expedited examination of a design application	

Other fee (specify) _____

* Reduced by Basic Filing Fee Paid

SUBTOTAL (3) ($) 500.00

SUBMITTED BY

Name (Print/Type)	John C. Pokotylo	Registration No. (Attorney/Agent)	36,242	Telephone	(732) 542-9070
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IN THE UNITED STATES
PATENT AND TRADEMARK OFFICE

Attorney Docket No.: **Juniper-11 (JNP-0105)**

Appl. No.: **09/885,485**

Applicants: **Kaushik GHOSH et al.**

Filed: **June 20, 2001**

Title: **GENERATING PATH CENTRIC TRAFFIC INFORMATION FOR ANALYSIS USING AN ASSOCIATION OF PACKET CENTRIC INFORMATION TO PATH CENTRIC INFORMATION**

TC/A.U.: **2155**

Examiner: **Bharat Barot**

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

S I R:

APPEAL BRIEF

Further to the Notice of Appeal filed on May 1, 2006, which set a period for response to expire on July 3, 2006, the Appellant requests that the Board reverse all outstanding grounds of rejection in view of the following.

I. Real Party In Interest

The real party in interest is Juniper Networks. An assignment of the above-referenced patent application from the inventors to Juniper Networks was recorded in the Patent Office starting at Frame 0072 of Reel 011924.

II. Related Appeals and Interference

There are no related appeals or interferences.

III. Status of Claims

Claims 1-40 are pending.

Claims 21-24 and 35-40 have been withdrawn.

Claims 1-5, 15-17, 19, 20, 25, and 31-34 stand rejected. (Note that the cover page of the final Office Action (Paper No. 20051114) and the Advisory Action (Paper No. 20060327) incorrectly note that claims 1-10 (or 1-20) and 25-34 are rejected. This is inconsistent with the body of the final Office Action, as well as the objected to claims listed in the Advisory Action.) More specifically, Claims 1-3, 15-17, 19-20, 25, and 31-34 stand rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Patent No. 6,745,243 ("the Squire patent"). Claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Squire patent in view of U.S. Patent No. 6,771,637 ("the Suzuki patent").

Claims 6-14, 18 and 26-30 are objected to as depending from a rejected base claim, but were found to include allowable subject matter.

The rejection of claims 1-5, 15-17, 19, 20, 25, and 31-34 is appealed.

IV. Status of Amendments

The amendment (to the specification only) filed subsequent to the final Office Action (Paper No. 20051114) on February 28, 2006 has been entered.

V. Summary of the Claimed Subject Matter

Independent claim 1 claims a method for generating traffic information for analysis comprising *(a)* accepting at least one sample derived from addressed data (See, e.g., 260 and 270 of Figure 2 and page 9, line 25 through page 10, line 18; 330 of Figure 3 and page 11, lines 11 and 12; and block 705 of Figure 7 and page 14, lines 17-28.), *(b)* determining path-centric information (examples of path-centric information include origin autonomous system, a peer autonomous system, and autonomous system path as described on page 5, lines 6 and 7) based on the accepted at least one sample (See, e.g., 330 and 320 of Figure 3, page 11, lines 12-13; Figures 5 and 6 and page 12, line 30 through page 14, line 15; block 715 or 740 of Figure 7 and page 15, lines 1, 2 and 21-30.) and *(c)* adjusting a traffic metric (examples of a traffic metric include a byte count, and/or a packet count as described on page 5, lines 14 and 15) of a traffic parameter based on the determined path-centric information (See, e.g., block 732 of Figure 7 and page 15, lines 2-17, or block 744 of Figure 7 and page 16, lines 1-15.)

Similarly, independent claim 25 teaches a corresponding apparatus (See, e.g., Figures 16 and 17, and page 18, line 1 through page 20, line 12.) for generating traffic information for analysis, the apparatus comprising ***(a)*** an input for accepting at least one sample derived from addressed data (See, e.g., Figures 16 and 17, and page 18, line 1 through page 20, line 12, and especially 1632 of Figure 16, 1758, 1754, 1756, 1760, 1742, 1744, 1746, 1722, 1724, and 1728 of Figure 17 and page 19, lines 15- 31.), ***(b)*** means for determining path-centric information based on the accepted at least one sample (See, e.g., Figures 16 and 17, and page 18, line 1 through page 20, line 12, and especially, 1728 of Figure 17 and page 20, lines 6-8.); and ***(c)*** means for adjusting a traffic metric of a traffic parameter based on the determined path-centric information (See, e.g., Figures 16 and 17, and page 18, line 1 through page 20, line 12, and especially, 1728 of Figure 17 and page 20, lines 6-8.).

Finally, independent claim 32 recites data forwarding device (See, e.g., Figures 2, 16 and 17.) comprising ***(a)*** an addressed data forwarding facility for forwarding addressed data based on forwarding information (See, e.g., 210 of Figure 2 and page 8, lines 16-19; Figure 16 and page 18, lines 10 and 11; and elements below line 1710 of Figure 17 and page 19, lines 15-25.), ***(b)*** a routing facility for determining and disseminating network state information, and for generating path information based on the network state information (See, e.g., 240, 235, 230 and 225 of Figure 2 and page 8, lines 19-31; Figure 16 and page 18, lines 10 and 11; and

elements 1726, 1732, 1734, 1736 and 1738 of Figure 17, and page 19, line 31 through page 20, line 7.), ***(c)*** a sampler for generating samples based on accepted addressed data (See, e.g., 250 of Figure 2 and page 9, line 26 through page 10, line 18; Figure 16 and page 18, lines 10 and 11; and 1746 of Figure 17 and page 19, lines 30 and 31.), ***(d)*** means for determining path-centric information based on the samples generated by the sampler (See, e.g., 270 and 280 of Figure 2 and page 10, lines 20-31; Figure 16 and page 18, lines 10 and 11; and 1728 of Figure 17 and page 20, lines 6-8.), and ***(e)*** means for adjusting a traffic metric of a traffic parameter based on the determined path-centric information (See, e.g., 270 and 285 of Figure 2 and page 10, lines 20-31; Figure 16 and page 18, lines 10 and 11; and 1728 of Figure 17 and page 20, lines 6-8.).

The foregoing embodiments, consistent with the present invention, may be useful, for example, for associating samples with path-centric information for use in traffic analysis.

VI. Grounds of Rejection to be Reviewed on Appeal

The issues presented for review are whether (separately patentable groups of) claims:

> Claims 1-3, 15-17, 19, 20, 25, and 31-34 are anticipated under 35 U.S.C. 102(e) by the Squire patent.

Claims 4 and 5 are unpatentable under 35 U.S.C. § 103(a) over the Squire patent in view of the Suzuki patent.

VII. Argument

The Appellant respectfully requests that the Board reverse the final rejection of claims 1-5, 15-17, 19, 20, 25, and 31-34 (or claims 1-10 (or 1-20) and 25-34 as incorrectly listed on the cover pages of the final Office Action and the Advisory Action) in view of the following.

Rejections under 35 U.S.C. § 102

Claims 1-3, 15-17, 19-20, 25, and 31-34 stand rejected under 35 U.S.C. 102(e) as being anticipated by the Squire patent. The Appellant respectfully requests that the Board reverse this ground of rejection.

Since some of the main issues on appeal depend on the interpretation of the claim term "path-centric information", this term is first introduced. The term "path centric information" is described in the specification. In Phillips v. AWH Corp., 75 U.S.P.Q.2d 1321 (Fed. Cir. July 12, 2005) (en banc) (referred to as "Phillips v. AWH" below), the Court of Appeals for the Federal Circuit ("the CAFC") stated:

> the specification "is always highly relevant to the claim construction analysis. Usually, it is dispositive; it is the single best

> guide to the meaning of a disputed term."

Id., at 1327, quoting from Vitronics Corp. v. Conceptronic, Inc., 90 F.3d 1576, 1582 (Fed. Cir. 1996). Thus, various areas of the specification are referenced below.

The specification states:

> Often, forwarding devices such as routers are equipped to sample packets, or at least header information in such packets, accepted and forwarded. Unfortunately, however, such samples often will not include information used by traffic analysis tools. ***For example, such traffic analysis tools will often want network and inter-network information (also referred to as "path-centric" information) not included in such samples. Accordingly, there is a need to associate such samples with information used by traffic analysis tools.*** Given the potentially large number of packets, such techniques for associating the samples with path-centric information should be efficient, both in terms of processing time and storage. Moreover, it may be desirable to provide various parameters to be analyzed by traffic analysis tools in a convenient form. The generation of such parameters in a convenient form should be efficient, both in terms of processing time and storage. [Emphasis added.]

Page 4, lines 4-16. The specification further states:

> ***The path centric information may include an origin autonomous system and a peer autonomous system, or an***

> ***autonomous system path***. The part of the sample(s) used as a search key may be an internet protocol prefix, a source address, and/or a destination address. [Emphasis added.]

Page 5, lines 6-9. The specification also states:

> The present invention may be used to (i) associate packet samples with ***path-centric information (e.g., autonomous system path information)***, (ii) aggregate information from, and/or associated with, the samples, and (iii) export such aggregated information for use by a traffic (flow) analysis tool(s). ***The network being analyzed may be an autonomous system within an inter-network***, such as that 100 depicted in Figure 1 and introduced in § 1.2.1 above. [Emphasis added.]

Page 8, lines 7-12. The specification further states:

> Recall that ***traffic (e.g., flow) analysis operation(s) 290 may want further information (e.g., path-centric information) that will not be found in the samples***. Accordingly, traffic (flow) aggregation operation(s) 270 may operate to (i) associate the samples with further information, and (ii) aggregate information from, and/or associated with, the samples, thereby generating traffic (e.g., flow) information 285 to be used by the traffic (flow) analysis operation 290. [Emphasis added.]

Page 10, lines 20-25.

In view of the foregoing, "path-centric information" may be network and inter-network information such as, for example, an origin autonomous system and a peer autonomous system, or an autonomous system path.

Processing information on a path-centric basis is useful. For example, the specification states:

> Recall that different network service providers (e.g., ISPs) may own and/or manage various autonomous systems (ASs). ***Such providers want to analyze traffic within their network, traffic entering their network from another network (another AS), and traffic leaving their network to another network (another AS). Such traffic analysis may be used when planning capacity, when defining a hierarchical network within an autonomous system, for billing and accounting, and for developing or updating arrangements with the other network service providers (such as peering agreements for example).*** [Emphasis added.]

Page 3, lines 11-18.

Thus, path-centric information might be different from packet-centric information. For example, the specification states:

> Referring back to decision branch point 715, if a matching item (record) is not found, then using ***packet-centric information*** (e.g., source and destination IP addresses), ***path-centric information*** (e.g., AS path) may be determined for the sample as indicated by block 740. [Emphasis added.]

Page 15, lines 21-24. The specification also states:

> As can be appreciated, the information in Figures 9-13 can be thought of as ***packet*-centric information, since it is inherent from the packet samples***. On the other hand, the information in Figure 14 can be [thought] of as ***path*-centric information, since it has to do with the known and/or expected path of the packet through the network(s)***. [Emphasis added.]

Page 17, lines 5-9. Thus, in some cases, path-centric information might not be included in a packet (or addressed data) sample. In such cases, it might be determined from a packet (or addressed data) sample.

The Examiner's concerns seems to be that he considers term "path-centric information" to be broad. Even assuming, arguendo, that this is true, this term is different from the session information (OSI Layer 5 information) processed in the Squire patent (and is further defined in dependent claims 16, 17, 28 and 29.) Before addressing various claims, the Squire patent is introduced.

The Squire patent concerns the use of network caching and load balancing to better manage network bandwidth. (See, e.g., column 1, lines 37-40.) It notes that in prior art network caches, discriminating network traffic at the layer 3 and/or layer 4 level can overwhelm the processing capability of such network caches. (See, e.g., column 2, lines 29-37.) The Squire patent further notes that load balancing using layer 3 and/or layer 4

information for traffic discrimination has similar problems. (See, e.g., column 2, lines 38 and 39.)

To address these problems found in prior caching and load balancing techniques, the Squire patent proposes to use network session information, identified by a network address translator, to select network traffic to be cached. (See, e.g., column 3, lines 1-16.) It is known that the Session Layer is layer five of the seven layer Open Systems Interconnection ("OSI") reference model. The Session Layer responds to service requests from the presentation layer (layer 6) and issues service requests to the transport layer (layer 4). The Session layer provides the mechanism for managing the dialogue between end-user application processes. For example, as is known in the art, the session layer might be used to allow a user to log into a remote timesharing system, transfer a file between two machines, manage dialog control, manage tokens, provide synchronization, etc. (See, e.g., A. S. Tanenbaum, Computer Networks, 3rd Ed., pp. 32 and 33 (1996 Prentice Hall, Upper Saddle River, NJ).

Notwithstanding the grouping of the claims below, the Appellant reserves the right to amend the claims in the event that a new ground of rejection is presented.

Group Consisting of Claims 1-3, 15, 25 and 32-34

Independent claims 1, 25 and 32 are not anticipated by the Squire patent because the Squire patent does not teach acts of (or means for) determining ***path-centric information*** based on an accepted sample(s), and ***adjusting a traffic metric of a traffic parameter based on the determined path-centric information.*** Examples of path-centric information provided in the specification of

the present application include an origin autonomous system ("AS"), a peer AS, and an AS path. Examples of a traffic metric provided in the specification of the present application include a byte count and a packet count. Examples of traffic parameters provided in the specification of the present application include a pair of source and destination addresses, a pair of source and destination ports, and a pair of ASes.

The Examiner cites Figures 4 and 6, as well as column 6, line 42 through column 7, line 8, and column 9, lines 31-57 of the Squire patent as teaching these acts (or means). (See, e.g., Paper No. 20051114, page 3.) Figure 4 of the Squire patent illustrates of a datagram used by a network cache/load balancing device, and in particular session information 402 used to identify/discriminate packets for caching and load balancing. This is also described in the cited portions of columns 6 and 7. In particular, as indicated by blocks 604 and 606 of Figure 6, the session information is identified and used to determine whether or not the datagram is of interest. If so, if the datagram is a request, it can be determined whether the request can be satisfied with locally cached information (Block 610), and if the datagram is not a request (e.g., if it's a response), it can be determined whether the response should be cached (Block 616). In either case, the datagram can then be routed in accordance with a network management strategy. (See, e.g., Block 612.) This is also described in the cited portion of column 9. Column 6, lines 59-62 indicate that the Session Layer information may include HTTP resource identifiers, file

transfer protocol (FTP) resource identifies, Gopher service names, Archie services, etc.

None of the foregoing concerns determining path-centric information such as an origin AS, a peer AS, or an AS path for example. Briefly stated, ***the session information discussed in the Squire patent is not path-centric information as claimed***. Note that ASes are known in network communications as subnetworks that are connected together. (See, e.g., A. S. Tanenbaum, Computer Networks, 3rd Ed., p. 412 (1996 Prentice Hall, Upper Saddle River, NJ). Further, the specification states:

> an internet 100 may be viewed as a number of sub-networks or "autonomous systems" (also referred to as "AS") 110, 150. Different entities (such as Internet service providers ("ISPs")) may own and/or operate different autonomous systems. A routing algorithm for use within an autonomous system is called an "interior gateway protocol" ("IGP"), while a routing algorithm for use between autonomous systems is called an "exterior gateway protocol" ("EGP"). Known exterior gateway protocols include the "border gateway protocol" ("BGP").

Page 2, lines 10-18. To reiterate, the Squire patent concerns Session Layer information, which is used to establish protocols between two devices, not path-centric information, which concerns ASes through which data travels.

Further, the Squire patent does not concern adjusting a traffic metric of a traffic parameter based on the determined path-centric information. Rather, it

concerns using Session Layer information to determine whether to look for previously cached information if a request is received, and to determine whether to cache information from a response. This has nothing to do with adjusting a traffic metric (e.g., a byte count, a packet count, etc.) of a traffic parameter (e.g., a pair of source and destination addresses, a pair of source and destination ports, a pair of ASes, etc.).

Therefore, independent claims 1, 25 and 32 are not anticipated by the Squire patent for at least the foregoing reasons. Since claims 2, 3 and 15 depend from claim 1, and since claims 33 and 34 depend from claim 32, these claims are similarly not anticipated by the Squire patent.

Claim 16

Further, dependent claim 16 recites that the path-centric information, upon which an adjustment to a traffic metric of a traffic parameter is based, includes an origin AS and a peer AS. The Examiner contends that Figure 1 and column 4, line 13 through column 5, line 61 of the Squire patent teaches this feature. (See, e.g., Paper No. 20051114, page 4.)

The cited sections of the Squire patent mainly describe a communications network -- they don't mention ASes. Although ASes are known concepts in network communications, there is nothing in the Squire patent that teaches adjusting a traffic metric of a traffic parameter based on an origin AS and a peer AS.

Accordingly, claim 16 is not anticipated by the Squire patent for at least this additional reason.

Claim 17

Further, dependent 17 recites that the path-centric information, upon which an adjustment to a traffic metric of a traffic parameter is based, includes an AS path. The Examiner contends that Figure 1 and column 4, line 13 through column 5, line 61 of the Squire patent teaches this feature. (See, e.g., Paper No. 20051114, page 4.)

As just discussed above, the cited sections of the Squire patent mainly describe a communications network -- they don't mention ASes. Although ASes are known concepts in network communications, there is nothing in the Squire patent that teaches adjusting a traffic metric of a traffic parameter based on an AS path.

Accordingly, claim 17 is not anticipated by the Squire patent for at least this additional reason.

Claim 19

Furthermore, dependent claim 19 recites that the traffic metric of the traffic parameter adjusted on the basis of the path-centric information is a byte count and/or a packet count. The Examiner cites column 5, line 61 through column 6, line 5 of the Squire patent as teaching this feature. (See, e.g., Paper No. 20051114, page 4.)

The cited section of the Squire patent simply notes that a packet may include a number of bytes of data which is dependent upon the communications resources of a client, an origin server, and a network protocol used by the client and server. This does not teach adjusting a byte count or a packet count of a traffic parameter based on path-centric information in a sample. It seems that the Examiner's argument is that controlling a byte count

of a packet corresponds to the claimed adjusting a traffic metric of a traffic parameter. However, this is done on the basis of the two devices (i.e., the origin server and the client) and the protocol that they use, and has nothing to do with a path-centric information.

Accordingly, claim 19 is not anticipated by the Squire patent for at least this additional reason.

Group Consisting of Claims 20 and 31

Dependent claims 20 and 31 each further recite that the traffic parameter is selected from a group of traffic parameters consisting of (A) a particular pair of source and destination addresses, (B) a particular pair of source and destination ports, and (C) a particular pair of autonomous systems. The Examiner cites Figure 2-4 and column 6, lines 17-62 of the Squire patent as teaching this feature.

Figures 2-4 of the Squire patent simply illustrate a network datagram. To improve efficiency and available bandwidth of the network, the Squire patent teaches identifying and discriminating network traffic based on network session layer information, such as HTTP resource identifiers, file transfer protocol (FTP) resource identifiers, Gopher service names, Archie services and the like. (See, e.g., column 6, lines 42-48 and 59-62.) This to not teach adjusting a traffic metric of (A) a particular pair of source and destination addresses, (B) a particular pair of source and destination ports, or (C) a particular pair of autonomous systems, based on determined path-centric information.

Accordingly, claims 20 and 31 are not anticipated by the Squire patent for at least this additional reason.

Rejections under 35 U.S.C. § 103

Claims 4 and 5 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over the Squire patent in view of the Suzuki patent. The Appellant respectfully requests that the Board reverse this ground of rejection.

The Suzuki patent concerns gateways arranged between circuit switched networks and the Internet. (See, e.g., the Abstract and elements 1-4 of Figure 1.) Different aspects of the Suzuki patent might set control channels based on various protocols by a "prior connection" before a call setting request is received. This advantageously reduces the time needed to set up a call once a call request is received. (See, e.g., column 3, lines 4-57.)

The number of control channels to be set by "prior connection" might be increased when traffic intensities increase, and/or be decreased when traffic intensities decrease. This advantageously increases efficiencies of the call setting processes and the use of control channels. (See, e.g., column 3, line 58 through column 5, line 3.) In this regard, a channel count management table 69 illustrated in Figures 3(A) and 3(B) defines how many control channels should be set, before a call setting request is received, under various traffic conditions (normal, low, high). (See, e.g., column 8, line 45 through column 9, line 35.) A channel number management table 70 illustrated in Figure 4 show the state of the setting of such control channels.

Referring to Figure 6, cited by the Examiner, for each of a number of various types of channels, a number of control channels that should be present under a normal

condition are found (S102, S105, and S108), the control channels are set (S103, S106 and S109), and the number of control channels actually set are stored in table 70 (S104, S107 and S110).

Claim 4

The Examiner concedes that the Squire patent does not teach that an act of determining path-centric information based on an accepted sample includes using a least a part of the sample as a search key to find an item with a closest matching key. The Examiner relies on the Suzuki patent as teaching this admitted deficiency of the Squire patent. However, even assuming, arguendo, that the Suzuki patent includes such a teaching, and further assuming, arguendo, that one skilled in the art would not have been motivated to combine these references as proposed by the Examiner, the purported teachings of the Suzuki patent would not compensate for the deficiencies of the Squire patent with respect to claim 1, addressed above. That is, the purported teachings of the Suzuki patent neither teach, nor suggest, acts of determining ***path-centric information*** based on an accepted sample(s), and ***adjusting a traffic metric of a traffic parameter based on the determined path-centric information***. Accordingly, claim 4 is not rendered obvious by the Squire and Suzuki patents for at least this reason.

Furthermore, as used in the Suzuki patent, the "path number" is an output path of the gateway on the Internet side. (See, e.g., column 8, lines 54 and 55.) Consequently, these "path numbers" are not at least a part of at least one sample derived from accepted

addressed data. Thus, claim 4 is not rendered obvious by the Squire and Suzuki patents for at least this additional reason.

Claim 5

In rejecting claim 5, the Examiner notes that Suzuki patent uses a table data structure, and further notes that hash tables, binary search trees and tries are well known data structures. However, the Examiner provides no motivation or suggestion in the art to use such purportedly well known data structures in the context of the tables described in the Suzuki patent. Therefore, the Examiner has not made a *prima facie* showing of obviousness. Consequently, claim 5 is not rendered obvious by the Squire and Suzuki patents for at least this additional reason.

XIII. Claims appendix

An appendix containing a copy of the claims on appeal is filed herewith.

IX. Evidence appendix

There is no evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132, nor is there any other evidence entered by the Examiner and relied upon by the appellant in the appeal.

X. Related proceedings appendix

There are no decisions rendered by a court of the Board in any proceeding identified in section II above pursuant to 37 C.F.R. § 41.38 (c) (1) (ii).

Conclusion

In view of the foregoing, the Appellant respectfully submits that the pending claims are in condition for allowance. Accordingly, the Appellant requests that the Board reverse each of the outstanding grounds of rejection.

Respectfully submitted,

July 3, 2006

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CERTIFICATE OF MAILING under 37 C.F.R. 1.8(a)

I hereby certify that this correspondence is being deposited on **July 3, 2006** with the United States Postal Service as first class mail, with sufficient postage, in an envelope addressed to the Mail Stop Appeals-Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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CLAIMS APPENDIX PUSUANT TO
37 C.F.R. § 41.37 (c) (1) (viii)

Claim 1 (original): A method for generating traffic information for analysis, the method comprising:

a) accepting at least one sample derived from addressed data;

b) determining path-centric information based on the accepted at least one sample; and

c) adjusting a traffic metric of a traffic parameter based on the determined path-centric information.

Claim 2 (original): The method of claim 1 wherein the addressed data is a packet.

Claim 3 (original): The method of claim 1 wherein the sample includes information from the header of a packet.

Claim 4 (original): The method of claim 1 wherein the act of determining path-centric information based on the accepted at least one sample includes using at least a part of the at least one sample as a search key to find an item with a closest matching key in a data structure.

Claim 5 (original): The method of claim 4 wherein the data structure is a searchable data structure selected from a group consisting of (A) a hash table, (B) a binary search tree, and (C) a trie.

Claim 6 (original): The method of claim 1 wherein the act of determining path-centric information based on the accepted at least one sample includes:

i) using at least a part of the at least one sample as a search key to find a first item with a closest matching key in a first data structure; and

ii) using at least a part of the first item found as a search key to find a second item with a matching key in a second data structure.

Claim 7 (original): The method of claim 6 wherein the second item includes path-centric information.

Claim 8 (original): The method of claim 6 wherein the second item includes an origin autonomous system and a peer autonomous system.

Claim 9 (original): The method of claim 6 wherein the second item includes an autonomous system path.

Claim 10 (original): The method of claim 6 wherein the first and second data structures are tries.

Claim 11 (original): The method of claim 6 wherein the first data structure is a Radix trie.

Claim 12 (original): The method of claim 6 wherein the at least a part of the at least one sample used as a search key is an internet protocol prefix.

Claim 13 (original): The method of claim 6 wherein the at least a part of the at least one sample used as a search key is at least one of (A) a source address and (B) a destination address.

Claim 14 (original): The method of claim 6 wherein the at least a part of the first item found used as a search key is an autonomous system index.

Claim 15 (original): The method of claim 1 wherein the sample includes at least two parameters selected from a group parameters consisting of (A) a source address, (B) a destination address, (C) a protocol, (D) a source port, (E) a destination port, (F) an interface number, (G) a type of service, (H) an SNMP index, (I) a kernel logical interface index, and (J) a type of interface indice.

Claim 16 (original): The method of claim 1 wherein the path-centric information determined includes an origin autonomous system and a peer autonomous system.

Claim 17 (original): The method of claim 1 wherein the path-centric information determined includes an autonomous system path.

Claim 18 (original): The method of claim 1 wherein the act of adjusting a traffic metric of a traffic parameter based on the determined path-centric information includes:

i) using a part of the determined path-centric information as a key to search items of traffic parameters;

ii) if a traffic parameter with a matching key is found, incrementing its traffic metric;

iii) if none of the traffic parameters has a matching key, creating a new item.

Claim 19 (original): The method of claim 1 wherein the traffic metric adjusted is at least one of (A) a byte count and (B) a packet count.

Claim 20 (original): The method of claim 1 wherein the traffic parameter is selected from a group of traffic parameters consisting of (A) a particular pair of source and destination addresses, (B) a particular pair of source and destination ports, and (C) a particular pair of autonomous systems.

Claim 21 (withdrawn): A method for generating data structures for mapping information in a sample derived from addressed data, to path-centric information, the method comprising:

a) using network information, building a first data structure including items of a first type, each of the items of the first type including an autonomous system index and an internet protocol prefix, wherein the internet protocol prefix is a key; and

b) using network information, building a second data structure including items of a second type, each of the items of the second type including an autonomous system index and an autonomous system path, wherein the autonomous system index is a key,

wherein the first and second data structures may be used for generating traffic information for analysis.

Claim 22 (withdrawn): The method of claim 21 wherein the first and second data structures are tries.

Claim 23 (withdrawn): The method of claim 21 wherein the first data structure is a Radix trie.

Claim 24 (withdrawn): The method of claim 21 wherein the network information was derived from routing information.

Claim 25 (original): An apparatus for generating traffic information for analysis, the apparatus comprising:

a) an input for accepting at least one sample derived from addressed data;

b) means for determining path-centric information based on the accepted at least one sample; and

c) means for adjusting a traffic metric of a traffic parameter based on the determined path-centric information.

Claim 26 (original): The apparatus of claim 25 wherein the means for determining path-centric information based on the accepted at least one sample include a searching facility, the search facility (i) using at least a part of the at least one sample as a search key to find a first item with a closest matching key in a first data structure, and (ii) using at least a part of the first item found as a search key to find a second item with a matching key in a second data structure.

Claim 27 (original): The apparatus of claim 26 wherein the second item includes path-centric information.

Claim 28 (original): The apparatus of claim 26 wherein the second item includes an origin autonomous system and a peer autonomous system.

Claim 29 (original): The apparatus of claim 26 wherein the second item includes an autonomous system path.

Claim 30 (original): The apparatus of claim 25 wherein the means for adjusting a traffic metric of a traffic parameter based on the determined path-centric information include

i) a search facility, using a part of the determined path-centric information as a key to search items of traffic parameters; and

ii) an aggregator, wherein if a traffic parameter with a matching key is found, the aggregator increments the traffic metric of the traffic parameter, and wherein if none of the traffic parameters has a matching key, the aggregator creates a new item.

Claim 31 (original): The apparatus of claim 25 wherein the traffic parameter is selected from a group of traffic parameters consisting of (A) a particular pair of source and destination addresses, (B) a particular pair of source and destination ports, and (C) a particular pair of autonomous systems.

Claim 32 (original): A data forwarding device comprising:

a) an addressed data forwarding facility for forwarding addressed data based on forwarding information;

b) a routing facility for determining and disseminating network state information, and for generating path information based on the network state information;

c) a sampler for generating samples based on accepted addressed data;

d) means for determining path-centric information based on the samples generated by the sampler; and

e) means for adjusting a traffic metric of a traffic parameter based on the determined path-centric information.

Claim 33 (original): The data forwarding device of claim 32 wherein the routing facility effects a exterior gateway protocol.

Claim 34 (original): The data forwarding device of claim 32 wherein the routing facility effects a border gateway protocol.

Claim 35 (withdrawn): A data forwarding device comprising:

a) an addressed data forwarding facility for forwarding addressed data based on forwarding information;

b) a routing facility for determining and disseminating network state information, and for generating path information based on the network state information;

c) means, using the path information generated by the routing facility, for building a first data structure including items of a first type, each of the items of the first type including an autonomous system index and an internet protocol prefix, wherein the internet protocol prefix is a key; and

d) means, using the path information generated by the routing facility, for building a second data structure including items of a second type, each of the items of the second type including an autonomous system index and an autonomous system path, wherein the autonomous system index is a key,

wherein the first and second data structures may be used for generating traffic information for analysis.

Claim 36 (withdrawn): The data forwarding device of claim 35 further comprising:

e) a sampler for generating samples based on accepted addressed data;

f) means for determining path-centric information based on (i) the samples generated by the sampler, (ii) the first data structure, and (iii) the second data structure; and

g) means for adjusting a traffic metric of a traffic parameter based on the determined path-centric information.

Claim 37 (withdrawn): A machine-readable medium having stored thereon:

a) a first data structure including items of a first type, each of the items of the first type including an autonomous system index and an internet protocol

prefix, wherein the internet protocol prefix is a key; and

b) a second data structure including items of a second type, each of the items of the second type including an autonomous system index and an autonomous system path, wherein the autonomous system index is a key,

wherein the first and second data structures may be used for generating traffic information for analysis.

Claim 38 (withdrawn): The machine-readable medium of claim 37 wherein the first and second data structures are tries.

Claim 39 (withdrawn): The machine-readable medium of claim 37 wherein the first data structure is a Radix trie.

Claim 40 (withdrawn): The machine-readable medium of claim 37 further comprising:

c) network information derived from routing information.

EVIDENCE APPENDIX PURSUANT TO
37 C.F.R. § 41.37 (c) (1) (ix)

There is no evidence submitted pursuant to 37 C.F.R. §§ 1.130, 1.131, or 1.132, nor is there any other evidence entered by the Examiner and relied upon by the appellant in the appeal.

RELATED PROCEEDINGS APPENDIX PURSUANT TO 37 C.F.R. § 41.37 (c) (1) (x)

There are no decisions rendered by a court of the Board in any proceeding identified in section II of the Substitute Supplemental Appeal Brief pursuant to 37 C.F.R. § 41.37 (c) (1) (ii).